

What is claimed is:

1. A method for creating a signature of a sampled work in real-time, said method comprising:

receiving a sampled work;

- 5 segmenting said sampled work into a plurality of segments, said segments having predetermined segment and hop sizes;

creating a signature of said sampled work based upon said plurality of segments; and

storing said sampled work signature.

- 10 2. The method of claim 1, wherein said method further includes the act of providing a plurality of reference signatures having a segment size and a hop size.

3. The method of claim 2, wherein said method is characterized in that said hop size of said sampled work signature is less than said hop size of said reference signatures.

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4. The method of claim 1, wherein said act of creating a signature of said sampled work comprises calculating segment feature vectors for each segment of said sampled work.
5. The method of claim 2, wherein said act of creating a signature includes calculating a plurality of MFCCs for each said segment.
6. The method of claim 1, wherein said act of creating a signature includes calculating a plurality of acoustical features from the group consisting of at least one of loudness, pitch, brightness, bandwidth, spectrum and MFCC coefficients for each said segment.
7. The method of claim 1, wherein said sampled work signature comprises a plurality of segments and an identification portion.
8. The method of claim 7, wherein said plurality of segments of said sampled work signature comprise a segment size of approximately 0.5 to 3 seconds.
9. The method of claim 8, wherein said plurality of segments of said sampled work signature comprise a hop size of less than 50% of the segment size.
10. The method of claim 8, wherein said plurality of segments of said sampled work signature comprise a hop size of approximately 0.1 seconds.

~~11.~~ A method for identifying an unknown audio work, said method comprising:

providing a plurality of reference signatures each having a segment size and a hop size;

receiving a sampled work;

5 segmenting said sampled work into a plurality of segments, said segments

having predetermined segment and hop sizes;

creating a signature of said sampled work based upon said plurality of segments;

storing said sampled work signature; and

comparing said sampled work signature to said plurality of reference signatures to determine whether there is a match.

12. The method of claim 11, wherein said method is characterized in that said hop size of said sampled work signature is less than said hop size of said reference signatures.

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13. The method of claim 11, wherein said act of creating a signature of said sampled work comprises calculating segment feature vectors for each segment of said sampled work.
14. The method of claim 13, wherein said act of comparing said sampled work signature to said plurality of reference signatures comprises measuring the Euclidean distance between said feature vectors and comparing said Euclidean distance to a predetermined threshold.
15. The method of claim 13, wherein said act of creating a signature includes calculating a plurality of MFCCs for each said segment.
16. The method of claim 13, wherein said act of creating a signature includes calculating a plurality of acoustical features from the group consisting of at least one of loudness, pitch, brightness, bandwidth, spectrum and MFCC coefficients for each said segment.
17. The method of claim 11, wherein said sampled work signature comprises a plurality of segments and an identification portion.
18. The method of claim 17, wherein said plurality of segments of said sampled work signature comprise a segment size of approximately 0.5 to 3 seconds.

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23. The apparatus of claim 22, wherein said apparatus is characterized in that said hop size of said sampled work signature is less than said hop size of said reference signatures.

24. The apparatus of claim 21, wherein said means for creating a signature of said sampled work comprises calculating segment feature vectors for each segment of said sampled work.

25. The apparatus of claim 21, wherein said means for creating a signature includes calculating a plurality of MFCCs for each said segment.

26. The apparatus of claim 21, wherein said sampled work signature comprises a plurality of segments and an identification portion.

27. The apparatus of claim 26, wherein said plurality of segments of said sampled work signature comprise a segment size of approximately 0.5 to 3 seconds.

28. The apparatus of claim 26, wherein said plurality of segments of said sampled work signature comprise a hop size of less than 50% of the segment size.

29. The apparatus of claim 26, wherein said plurality of segments of said sampled work signature comprise a hop size of approximately 0.1 seconds.

30. The apparatus of claim 21, wherein said means for creating a signature includes means for calculating a plurality of acoustical features from the group consisting of at least one of loudness, pitch, brightness, bandwidth, spectrum and MFCC coefficients for each said segment.

5 31. A machine readable data transmission containing a data structure for a sampled work having a plurality of segments, said segments having predetermined segment and hop sizes.

32. The machine readable data transmission of claim 31, wherein said data structure is characterized in that said hop size of said sampled work signature is less than said hop size of a corresponding reference signature.

33. A machine-readable data medium containing a data structure for a sampled work having a plurality of segments, said segments having predetermined segment and hop sizes.

34. The machine-readable data medium of claim 33, wherein said data structure is characterized in that said hop size of said sampled work signature is less than said hop size of a corresponding reference signature.

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segmenting said sampled work into a plurality of segments, said segments

creating a signature of said sampled work based upon said plurality of

storing said sampled work signature.

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